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ABSTRACT

Accessibility to postsecondary education for adults depends on solving problems of distance, scheduling, advising, and financial aid. Diverse motives and developmental differences in adults must be accommodated in order to provide accessibility. Educational quality also depends on standards that recognize wide-ranging differences among these students, and the approach to standards must both encourage learning and provide substantive evaluation. To do so required developing "standards banks" that define and illustrate: (1) criterion-referenced standards; (2) norm-referenced standards; and (3) learner-referenced standards. Major changes in the nature of work and in the roles and expectations of women have contributed to the growing need for adult postsecondary education. These trends will continue. Systems designed today must recognize current conditions and respond to future changes. A planning inventory is included that provides a checklist of questions for use in comparing existing alternatives and designing new ones. (Author/MSE)

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Problems in the Postsecondary Education of Adults

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Abstract

Systems for the post-secondary education of adults must make accessible opportunities for both education and training which respond to diverse motives and developmental differences. Accessibility depends upon solving problems of (a) distance, (b) scheduling, (c) orientation, admission and advising, and (d) financial aid. Diverse motives include (a) professional/vocational preparation, (b) personal enrichment, (c) cultural and intellectual interests, (d) social concerns. These motives vary in content and significance in response to forces stemming from life cycle changes. They differ substantially for men and women. Significant differences in ego development, moral and ethical development, and intellectual development must be recognized. Those developmental differences influence motives for learning, orientations toward knowledge, institutional functions, educational alternatives, teaching practices, approaches to evaluation, and student-faculty relationships.

Educational quality depends on standards which recognize the wide ranging differences among adults. The approach to standards must both encourage learni and provide substantive evaluation. To do so requires developing "standards banks" which define and illustrate (a) criterion-referenced standards so studer can be evaluated in relation to explicit indices of performance or knowledge, (b) norm-referenced standards so students can be evaluated in relation to leve of performance and knowledge demonstrated by appropriate reference groups, and (c) learner referenced standards so students can be evaluated in terms of the gains in competence and knowledge they achieve.

Major changes in the nature of work and in the roles and expectations of women have contributed to the growing need for adult post-secondary education. These trends will continue. Systems designed today must recognize current conditions and respond to future changes.

A Planning Inventory for Post-secondary Education provides a check list of questions which can be used to compare existing alternatives and design new ones.

This paper addresses a large and complex topic. An effective system for the post-secondary education of adults will challenge many educational assumptions, institutional practices, and organizational structures. Within the constraints set for this paper we have selected six issues for treatment: purposes, access, motivation, developmental differences, standards, and cultural change. Numerous other problems remain but these seem to us fundamental. Effective education depends upon clear relationships between purposes and programs. Without access little education can occur. But unless access leads to educational opportunities pertinent to students' motives, learning and persistence will be limited. There are major developmental differences among adults. Educational practices which ignore these will misfire for many. Standards must be managed in ways that encourage learning while providing sound evaluation. Finally, we need to note cultural changes which have generated our concern for the education of adults and to which a system must respond.

These major issues will have to be addressed by any nation, region, or state tackling the post-secondary education of adults. The answers developed obviously must be appropriate for the prevailing social, economic, and cultural conditions. We do not presume to prescribe the forms those answers should take for diverse locations in Latin America or elsewhere. We are sensitive to the significance of those differences and to the critical need for indigenous formulations locally created.

We only presume to speak from our own knowledge based on the schooling and work experiences of middle-class U.S.A. We draw almost entirely on social and behavioral research carried out in the United States. That research has been

male dominated and oriented toward understanding what has been largely a "man's world". We try to remedy some of those historical limitations by calling attention to recent research concerning women. In short, we speak from our perspectives, aiming to address these major problem areas in ways which will help others do likewise as together we grapple with the critical need to provide post-secondary education for adults.

Consider these students:

Bob, 17, is a young high school graduate with a good record who wants to become a lawyer. He is interested in studying history, economics, and political science during his undergraduate career.

Sarah, 20, has been working with teenage addicts in a drug treatment center. She dropped out of a four-year college when she found the course requirements and classroom work incompatible with her educational needs, although she's not really certain just what she wants to do.

Charles, 23, a Marine Corps veteran, is a construction worker who also teaches a philosophy course in an experimental school of his own.

Donald, 34, is an auto worker and has been an elected union officer and bargainer at the national level for thirteen years. He wants a degree in labor studies.

Dianne, 37, has over 200 credit hours in higher education from institutions in the U.S., Jamaica, the West Indies, and the British Isles. She is an R.N. and a midwife who is developing curricula for Licensed Practical Nurse programs to upgrade hospital personnel. Eventually she wants to direct such a program in a large medical center.

Alan, 43, has taught electronics for seventeen years. He has seventy credits in English, math, social science, and physics, and a publisher's contract for a textbook which would be "the culmination of twenty years of work and study in the

electronics field." He wants to pursue studies which would help him do the researc and writing necessary to complete his book.

Harry, 47, is manager of an internal audit department of a large savings bank. He has twenty-two years of business experience as well as an A.S. degree in business management and wants to complete a B.S. degree in finance interrupted years ago.

Emily, 56, a home economics aide in the Department of Social Services, has 111 credits from five different colleges. For thirty-five years she has worked as a dietitian, nutritionist, adult education teacher, and caseworker aide in home management. She wants to improve her capacity to help disadvantaged persons with low incomes avoid relying on public assistance.

Charles, 69, finds retirement time dragging. He wants to develop his photography hobby to the point where he might do professional work and start a small business.

What problems do we need to solve to create a system which meets tho needs of these diverse students? A Planning Inventory for Post-secondary Education (PIPE) provides a conceptual framework for more detailed discussion. This series of questions can be used to examine and compare existing alternatives, or as a check list to design a new one. The particular institutional forms and educationa practices which give substantive answers to each question must vary from location to location. Furthermore, creating an "ideal" system which gives powerful response to all questions will not be within the immediate reach of most states or nations. But with a sound perspective at the outset that ideal may be approximated over time. Initial steps may be taken which facilitate rather than block further development. Undoubtedly this PIPE itself will require major revision soon after it comes off the press. But perhaps it can provide a starting point for more effective efforts to cope with several problems in the post-secondary education of adults.

PIPE: A Planning Inventory for Post-secondary Education

Develop institutional structures, academic processes, educational practices, and learning resources which provide substantive answers to each set of questions.

1. General Purposes

1.1 How does the program provide effective education; how does it foster increased differentiation and integration for each person so that individual development proceeds to more comprehensive and complex levels?

1.2 How does the program provide effective training; how does it help each person develop the shared language, knowledge, skills, and understandings necessary for professional/vocational achievement and effective citizenship?

1.3 How does the program maintain balance between these purposes, and maintain clarity about which is being served when?

2. Access

2.1 How are educational materials, instructional opportunities, tutorial assistance, and counseling services brought within reasonable reach?

2.2 How are the scheduling and time constraints imposed by obligations to work, family, and community recognized?

2.3 How are the admissions criteria, processes, information required, and timing made appropriate for adult students?

2.4 How are the financial aid forms, criteria, and applications systems designed to recognize persons of varying levels of income and obligations; how is necessary information and counsel provided?

3.0 Motivation

3.1 How are unrealistic or inaccurate perceptions of educational requirements addressed?

3.2 How are interested students helped to assess the potential benefits of participation; how are differences in career expectations and financial rewar between men and women addressed?

3.3 How are beginning students helped to cope with shaky self-confidence and develop a realistic sense of their strengths and weaknesses concerning post-secondary education?

3.4 How does the program respond to motives concerning professional/vocational preparation and advancement?

3.5 How does the program respond to motives concerning personal enrichment and development?

3.6 How does the program respond to motives concerning general education, and recreational or vocational interests?

3.7 How does the program respond to motives related to social and political concerns?

3.8 How does the program respond to variation in motivation resulting from life-cycle changes, challenges, and individual differences?

3.9 How does the program respond to motivations distinctive for women and for men?

4.0 Developmental Differences

4.1 How does the program recognize individual differences in ego development, intellectual development, moral and ethical development?

4.2 How does the program recognize individual differences in orientations toward knowledge?

4.3 How does the program recognize individual differences in learning processes?

4.4 How does the program provide varied teaching practices, student-teacher relationships, and approaches to evaluation appropriate to individual differences in development, orientations toward knowledge, and learning processes?

4.5 How do the varied educational alternatives provided respond to individual differences in development, orientations toward knowledge, and learning processes?

5.0 Educational Quality and Standards

5.1 How does the range of degrees offered provide sufficient breadth to recognize varied learnings, knowledge, and competence required by adults?

5.2 How are the criteria-referenced standards required for varied credentials and employers made known to students; how are they helped to evaluate themselves in relation to those criteria?

5.3 How are varied norm-referenced standards made known to students; how are they helped to evaluate their own knowledge and performance in relation to that of other reference groups important to them?

5.4 How are students helped to evaluate the gains they make in knowledge and skills, the degree to which they make progress in relation to the purposes which led them to participate in the program?

6.0 Cultural Change

6.1 How does the program respond to changes in work-life expectancy and in the nature and role of work?

6.2 How does the program respond to shifting social expectations and roles for men and women?

The following sections elaborate the issues and potentials outlined by these Planning Inventory questions. They do not offer detailed solutions. There are now, around the world, several diverse approaches under development. Empire State College of the State University of New York, the British Open University, radio and correspondence combinations in Kenya and Russia, Japan's University of the Air, and others summarized well by MacKenzie, Postgate and Scupham (1975), merit study. Locally appropriate systems can be developed by drawing on these prior attempts. Our aim is to identify clearly the problems which must be faced, and by so doing, indicate the general criteria for effective systems.

General Purposes

In the U.S. we take age 16-18 as the beginning point for adulthood. During those years many young persons legally and functionally assume major adult responsibilities: they become self-supporting, eligible to vote, drink, and be drafted, licensed to drive and marry. During these years they begin to disengage themselves from family and home. Thus problems in the post-secondary education of adults include late adolescents, the "young adults" of typical college age, as well as older persons; they include Keniston's "youth" (Keniston, 1965) as well as those over age 25.

Our approach to purposes is rooted in the assumptions and vision of Learning To Be, the Unesco report on the world of education, prepared by Faure et al, in 1972:

> "Since studies can no longer constitute a definitive 'whole' handed out to and received by a student before he embarks on adult life... educational systems must be thought out afresh, in their entirety, as must our very conception of them. If all that has to be learned must be continually re-invented and renewed, then teaching becomes education and, more and more, learning. If learning involves all of one's life, in the sense of both timespan and diversity, and all of society, including its social and economic as well as its educational resources, then we must go even further than the necessary overhaul of 'educational systems' until we reach the stage of a learning society". (1972, pp. XXXIII)

The learning society will require both education and training. Education is the amplification of two basic developmental processes: differentiation and integration. Increased differentiation occurs when one distinguishes among concepts formerly seen as similar, when interests become more varied, tastes more diverse, reactions more subtle -- in short, as we become more complex human beings. To foster increased differentiation education aims to free an individual from the limitations of outlook brought from his or her own locale, social class, and national heritage -- a freeing that opens the person to all the possibilities and impossibilities of the surrounding world, a freeing that leads to heightened sensitivity and awareness but which also can lead to coldness and insensitivity as the monstrous inconsistencies in the ways of the world are more sharply experienced.

But increasing differentiation must be accompanied by increasing integration. Relationships among parts must be perceived or constructed so more complex wholes result. Concepts from different disciplines must be brought to bear on one another in ways appropriate to varied problems.

So differentiation and integration are what education is about. It is contrary to training. Training serves to make persons more alike. It aims to develop a shared language, shared skills, shared information, shared objectives, and, with time, shared values. Thus while training starts with the task and conforms the learner to it, education starts with the learner and uses tasks in the service of increased differentiation and integration.

Adults need both education and training. They need well developed communication and computation skills. They need professional/vocational skills and more general competence required for work and effective social contributions. Some academic skills -- language, research methods, mathematics, writing -- also require training. But such training must rest on a healthy, complex, and growing root system of self-understanding, interpersonal competence, autonomy, integrity, and social interest. These more general educational foundations must be solid if adults are to sustain a satisfying existence and serve well the community, nation, and world with which their individual histories are intertwined.

The important thing is to be clear about when education is the purpose and when training. It is not simply a matter of content. It involves critical attention to the teaching and learning processes called for, to the orientation of the student toward his or her learning, to the ways in which experiences are examined.

History can be taught in ways which require students to memorize dates, events, major figures, and authoritative interpretations of casual relationships. When this occurs it is much more like training than education. The same can be said for other areas of the arts, humanities, social, and natural sciences. These

subject matters can also be taught in ways which call for critical analysis, tough minded evaluation and original syntheses. Students can be asked to apply varied concepts and traditions to their own condition and past experiences; to re-examine or reconstruct their own assumptions, working precepts, attitudes, belief systems in the light of evidence or opinions from varied disciplines.

Let us try to avoid the fuzzy objectives and mixed messages that occur when the distinctions between education and training are blurry. Without such clarity students often find themselves in training situations when they are looking for educational values. Others find themselves in educationally oriented conditions when they want to acquire shared skills, knowledge, or concepts which will be recognized by the gatekeepers to good jobs or significant social responsibilities. (Chickering, 1969, pp. 292-298)

Access

The demand is great.

A recent research report from the American Association of State College and Universities (Stampen, J., 1976, pg. 2) says "increases in enrollments among older students account for 46 percent of the growth in full-time enrollment between 1970 and 1974. Adding part-time enrollments would indicate that older students account for most of the recent increase in higher educational enrollments". By 1990, if current trends continue, there will be three times as many persons age 25 and older pursuing post-secondary education as there are 18-24 year olds.

According to testimony by Harold Hodgkinson, as Director of the National Institute of Education, "thirteen million adults in the U.S. would return to some kind of education if information on programs were made available to them. Another 26 million indicate that they would be interested in further education, but would need some counseling, as well as information about the programs.

"In addition, many adults in the United States exhibit educational needs that need not require conventional instruction. A California study, for example, showed that 21% of the adults interviewed wanted to assess their personal competencies and personal growth potential. Another 28% wanted to test their strengths and skills in a variety of subjects, and 20% expressed the need for personal counseling". (Hodgkinson, 1976)

But access is difficult.

Molly, 27, is divorced and has four children. She works as a waitress evenings and in a day care center mornings. She has tried going to classes on Saturdays but her childrens' illnesses and other unanticipated problems cause frequent absences.

Mark, 35, is a quarry worker, married, with two children. He wants a different job, and is anxious to pursue further education. The nearest opportunity is 23 miles away. Three nights a week he skips supper and drives the battered family car. No public transportation is available. Bad weather and mechanical problems mean missed classes and lost time in the library.

Sally, 23, is newly married and has a child. Her husband resents having to baby sit while Sally goes to class. She feels guilty about the costs and finds little time to study.

If access is to be improved, four problems need to be remedied: distance, scheduling, admissions and enrollment expectations, and finances.

Distance

Most adult students work full-time during the normal working day and week. Most are married, have children, and often are responsible for older parents as well. Frequently they are active community members. Pursuing post-secondary education for some may mean adding a pleasant addition to an already rich and satisfying existence; for many others it is part of the struggle for a more adequate

income, more satisfying work, a way out of a difficult situation. The basic point is that most adult students are not adding post-secondary education to a vacuum. They are trying to fit it into a life space already crowded.

Problems of distance and time therefore loom much larger than for the young person who has fewer constraints and responsibilities. When hours, energy, and money are spent traveling, fewer resources are left for learning, for active participation in college activities, for new relationships with fellow students. Time available to explore reserve books, watch films, talk with faculty members, engage in out-of-class discussions is sharply limited.

Moreover, the geographical distance reinforces the psychological and cultural distance between the daily life of home and work, and the "life of learning" in the academy. A balanced equilibrium or integration of the two is difficult to establish. Gradual expansion of self and enlarged identification is difficult to achieve. Heavy involvment with the academy may force an all or nothing choice. Abrupt divorce from the past may seem necessary. Anyone who has engaged seriously in the education of adults has seen weak marriages broken and strong marriages strained when one adult undertakes active pursuit of higher education, leaving the spouse alone at home base.

Scheduling

When only a limited number of courses and programs during evening hours are available to adults, they must patch together combinations and sequences based on expedience rather than on sound educational grounds. To obtain necessary "credits" they must study topics distant from their experiences or interests. Part-time study pieced together through several years means that relevant or pre-requisite material from earlier work may have been forgotten when called for by new studies.

Research evidence concerning the differences in educational experiences and outcomes for commuting and residence students is pertinent here. One comprehensive series of studies summed up the major findi gs his way:

"Students who live at home, in comparison with those who live in college dormitories, are less fully involved in academic activities, in extracurricular activities, and in social activities with other students. Their degree aspirations diminish and they become less committed to a variety of long range goals. They enter educationally and developmentally useful experiences and activities less frequently. They report a shrinking range of competence. Their self-ratings for a diverse array of abilities and desirable characteristics drop. Their satisfaction with college decreases, and they become less likely to return.

Commuters and residents begin their college careers with an unequal start which strongly favors the residents. The gap between them grows. Residents have access to, find, and are forced to encounter diverse experiences and persons who spur them on their way. Access, discovery, and encounter occur much less for commuters and they continue in circumstances that add weights to their pre-existing handicaps. Thus the major consequences of American higher education as it currently functions for commuters and residents is to increase the distance between them". (Chickering, A.W., 1974, pp. 84-85)

These studies were carried out for typical college age students and the results might be somewhat different for adults beyond age 25. We don't know how much discussions with family, friends, and fellow workers replace the dormitory discussions on campus. We don't know how much cultural activities, local libraries, museums, and other community resources substitute for the campus facilities. Adults may create networks for learning in their own home,

workplaces, or communities. But it is self-evident that the educational power and contribution of the college or university will drop as access to its varied opportunities for learning is limited by distance and scheduling.

Admissions and enrollment expectations

Access can be constrained by other requirements even when problems of distance and scheduling solved. A report of part-time students prepared by a Task Force of the State University of New York calls attention to some pervasive practices:

"Part-time student access is constrained and frustrated by a complex of problems that begins with admission and continues through registration and restrictions set for certain courses and programs.

"Admission forms typically request high-school transcripts, test scores, and information concerning participation in high-school activities, which are difficult for adult students to obtain and often are useless or misleading. Admissions judgments based on twenty-year-old grade-point averages or rank in class, and on outdated test scores may bear little relationship to the student's current ability to succeed in college. Once-sharp skills may have become rusty and dull, or significant deficiencies in ability or motivation may have been remedied. When adults are asked to take current admissions examinations their scores may be unduly depressed by anxiety and unfamiliarity with tests. The tests themselves, standardized on typical college-age populations and relying heavily on book learning, may not accurately assess the student's ability to learn. Admission processes often require commitment four or more months in advance of the enrollment date, but the family and work obligations of most part-time students often make it difficult or impossible for them to be confident about their situation that far ahead. Moreover, in many cases part-time students who want to pursue a particular course or two are required to complete lengthy matriculation procedures before registering for the courses that interest them.

"Part-time students have difficulty obtaining adequate advice and counsel concerning their educational plans, the academic program, and various institutional procedures and expectations. Faculty office hours usually are restricted in number and scheduled during the regular working day". (Hall et al, 1976)

Such institutional barriers are especially frustrating for women married to men whose profession or vocation requires them to change location frequently. Women who "go along" find it very difficult to put together a college education in the face of continual disruption. Their first responsibilities call for handling the moving out and moving in, getting the children settled in new schools, identifying doctors and dentists, and other support services for the family, learning where to find all the things required for ongoing daily living. Then, if there is time and energy left, they can search for a college or university that may accept some of their past credits and may offer courses or programs consistent with the educational purposes or degrees they have been pursuing. It is not unusual for such women to bring credits from six, eight, ten different colleges, and to have been unable to complete even a two-year degree in five or ten years.

Problems of access are not solved simply by extending to older persons arrangements designed for typical undergraduates. Admissions procedures, matriculation requirements, faculty availability, staffing patterns and schedules, all need re-thinking if access is to go beyond limited evening-course offerings.

But even when problems of distance and time, and more complex problems concerning institutional arrangements are solved, financial barriers may remain.

Finances[1]

Many adults need financial aid but the forms and systems designed for typical undergraduates do not serve them well. The attitude of financial aid

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1 The following comments concerning financial aid problems for adult students are essentially those of John Hall, Dean of Student Services, Empire State College.

professionals is one of the greatest obstacles. They refer to older students as "non-traditional" and see them as a "nuisance". Older students are entitled to financial aid but this attitude makes it difficult for them to get what is rightfully theirs.

The first problem is to obtain necessary information and forms. The distribution systems are designed to reach high school seniors or students already enrolled in college. Little is done to inform adult students about the kinds of financial assistance available. Nothing is done to help them cope with the numerous forms required by most Federal and State programs. High school and college students can obtain assistance from counselors and financial aid officers. Adults, especially those who go to school outside the usual 9 to 5 working day, have difficulty obtaining such help.

Obtaining the necessary information and forms only positions the adult to cope with more fundamental problems. The formulae used to determine eligibility are designed basically for young, "dependent" students. Even when they recognize the "independent" student, they seem to assume a young adult who has a high percentage of effective income available for educational purposes. The middle income older person with dependents is discriminated against.

Program guidelines themselves often discriminate when they are designed to offer "four years of assistance to recent high school graduates". Such guidelines obviously do not encourage adult students although legally they are not prohibited from receiving such grants. College work-study programs are another source of financial assistance. But they too are designed for younger students. Adults employed full- or half-time, or who have substantial family obligations, find it next to impossible to participate, yet large amounts of financial aid monies are available through such programs.

Most of the financial aid programs require information concerning the income and resources of parents. Some require that parents sign a petition for the applicant. These requirements are incongruous for 30-50 year olds who have their own children, who have not been dependent upon their parents for years and who may be contributing to their parents support.

Most aid programs require that a student be pursuing a degree. Thus a wide range of educational needs are not accomodated. Many older persons wish to change careers and update their skills. Often they have a college degree. But unless they enroll for another degree they cannot receive financial aid.

Adult women experience complexities beyond the generalizations outlined above. A married woman usually needs to obtain her husband's support. Unless she has an independent income which is not crucial to her family's support, the husband must share his income or be willing to sign for a loan. He must participate in the complex processes of applying for financial aid, and thereby admit to an implication of inadequacy as a "provider". Only a married women whose family income falls below the subsistence level can receive financial aid from a variety of federal state, or private resources without her husband's signature. (Durchholz & O'Conner, 1974)

Motivation

Strong motivation can lead to enrollment, despite problems of access. But there are major dis-incentives -- general perceptions and expectations -- which reduce motivation and keep adults from breaking the barriers.

Dis-incentives

Many adults who may not have completed high school, or who have been out of school for some years, are uncertain about their ability to do college work. They often find the high school studies of their own children difficult to understand. They question whether they can compete successfully with bright energetic

younger students. They are not used to reading abstruse and abstract materials. Many have had limited practice expressing complex ideas in writing, even though they understand them well and can deal with them orally. Premonitions of such difficulties make many adults hesitate unless there is an alternative that lets them test themselves without undue threat.

Another dis-incentive is uncertainty about financial "pay-off". The relative advantage in income and employability for a male college graduate over a high school graduate has shrunk. True, debates concerning research methods and results still rage, but students no longer see bright prospects for better jobs and higher salaries.

But the salary differences for females do not even have the "dollar added" value that exist for males. The professions women usually join after finishing college do not carry the prestige of those which men enter. Women still predominently enter teaching, nursing, secretarial studies, and other support or service professions while men predominate in business, engineering, medicine, and law. Sex typing of careers has been powerful: females comprise 70% of all teachers, and 98% of all nurses, but less than 2% of engineers, 7% of practicing physicians, 3% of architects, and 1% of all top managers. Even in the teaching profession men hold most of the top ranking positions as principals, superintendents, college presidents and vice presidents, and tenured professors. Thus entry of women into high prestige, high salaried occupations is limited. Obtaining a college degree may simply be a road to increased frustration.

At early ages young girls perform as well as boys in computational skills and scientific studies. But they begin to lose ground during the years preceding high school and continue to do so as time goes on. A recent National Science Foundation Study, for example, interviewed females with high interest and test scores in mathematics in grades seven and ten, in the sophomore year in college, and who were professional mathematicians. Disapproval from peers and teachers was reported by subjects as early as the seventh grade. (Levine, 1975) These

forces may in part explain the tendency of women to avoid mathematical and scientific careers. If large numbers of women lack a sense of confidence and competence in areas as encompassing as science and mathematics, or in relation to more general analytic skills, then many educational options and careers seem out of the question for them. (Cardascia and Morgan, 1974)

But there are yet more general disincentives for women. One might expect that post-secondary education could provide an arena where increased confidence and sense of self might be gained, as well as additional skills. College could not only provide a testing ground, but could offer useful models of action, achievement, exploration, renewal, contribution. But a curriculum dominated by the literature, the exploits and the history of men, is not well designed to fan a spark of initial motivation into a full fleged flame which fires sustained efforts for self development and achievement.

The recent emphasis on Women's Studies speaks to this dis-incentive. It attempts to meet needs which have become especially apparent in the last decade: for empirical data on women as distinct from men; for theories to adequately conceptualize both old and new knowledge about women; for a balanced presentation of the sexes in existing bodies of knowledge. Unfortunately, Women's Studies are still treated as a special topic, not well integrated with the numerous professional and intellectual areas of concern to both men and women. Ultimately, Women's Studies should increase the discussion of women's roles and contributions in all major curricula. When that happens one significant dis-incentive will have been removed.

Lest the value of college education for women be questioned, we should recall one of the most striking, though neglected findings of Trent and Madsker's massive follow-up study of personality development among high school graduates. (Trent and Medsker, 1968) Numerous groups were tested during their senior year and then two

and four years after graduation: men and women who had completed various amount of college, who had gone to work in various settings, who had married directly out of high school. The only group that showed no progress, and whose scores on several measures actually regressed, were women who married upon graduation and pursued no further education nor went to work. For other women, there was a generally direct and positive relationship between the amount of post-secondary education accomplished and the personal development which occurred.

But despite these dis-incentives adult men and women do enroll. Despite the problems of distance, time, institutional arrangements and finances which limit access, their numbers increase. What are the incentives which lead them to override those uncertainties, to tackle the access problems, to assume those extra burdens? What are the forces that lie behind the increasing pressures for life-long learning?

Incentives

The results from various survey research studies are consistent in the major motives they identify. Medsker summarizes results from a survey of older students enrolled in 18 different "extended degree programs" throughout the United States in 1972, '73, and '74:

"Two of the reasons... designated by over two-thirds of the students in all but two of the programs were 'to attain greater personal enrichment and development, and to satisfy personal desire for a college education'. Thus, it appears that for many persons a prime motive was to satisfy a pent-up desire for something they hadn't had. For others -- or perhaps even to the same people -- the objective was more utilitarian... 'to improve my chances of increasing my income' and 'to acquire specific skills that will be useful on a job'... (Medsker et al, 1975, pg. 50)

Medsker also reports that three other objectives were important to a majority of students in some programs: to increase appreciation of art, music, literature,

and other cultural expressions, to develop understanding and appreciation of science and technology, to become involved in social and political concerns.

Data from the National Center for Educational Statistics, concerning part-time students, are consistent with Medsker's findings. The major motives were: "to improve or advance in a job", "for personal or family interests", "for general information", "to get a new job". The major areas of educational activity by degree seeking part-timers were: "general education", "occupational training", "community issues", "personal and family living". (National Center for Educational Statistics, 1974)

MacKenzie, Postgate and Scupham (1975) report similar motives:

> "As to motives, the vocational predominate: to raise, enlarge, update technical or professional qualifications in order to seek advancement, a better job, avoid redundancy, gain some new skill created by a technological advance. The acquisition of skills for public duties and an understanding of public affairs, together with the skills associated with home and family life, are other main areas of adult interest. (1975, pg. 40)

Note that these motives indeed do call for both education and training. They express needs for specific skills as well as for personal enrichment and development, for general education and occupational training, for increased appreciation and understanding as well as for community activities and more effective citizenship. Educational alternatives which focus exclusively on either education or training will leave significant numbers of adults wanting. It is probably no coincidence that the renewed concern for more effective integration of liberal and professional/vocational education occurs together with rapid increases in the numbers of adults seeking post-secondary education.

Each survey research response has flesh and blood behind it. Two women and two men illustrate some of the individual dynamics. The women:

"When I married during my sophomore year in college, my husband and I said to each other that someday I would finish school. We have been saying that for over 10 years now. I felt it was now or never for me, especially since I had sacrificed so that my husband could get a graduate degree and become established in his career. Now it is my turn".

"I am adjusting to the academic world and living life on my own terms instead of being an extension of someone else's needs; learning to write papers instead of recipes, learning how to cope with being 'too old' or 'too straight'; learning to question the value system that hasn't taken women seriously in any field except the labor market -- and the pun is intended. I felt all these things in the beginning. I am now so happy, so fulfilled, so certain of belonging here that I feel like a brand new human being. I now see all of the options I really have. It's a beautiful feeling".

And the men:

"My boss wants to help me move into a supervisory position, hopefully in our division, but if not, in the next section. If I finish my college degree and get some further training in administration, management, and economics I'll be better prepared and I'll look better on paper. It will help me get the jump on some of the other guys trying to move up".

"I'm dead-ended in this job I'm doing now. This outfit's not going to grow, and I don't see any of the boys up the line ready to move. Besides, when I look at what they have to do and how they spend their time, I'm not sure I want that for another twenty years anyway. Maybe a college degree and a chance to think about different possibilities will turn up something else".

These incentives -- to prepare for better paying or more interesting work, to satisfy desires for personal enrichment and development -- stem from changes in circumstances, self-perceptions, and aspirations which seem to follow patterns related to the life-cycle. To understand the complex motives which lead adults to pursue post-secondary education, and to understand significant differences which occur as a function of age, we need to look carefully at emerging life-cylce research.

Life Cycle Influences on Motivation

There is nothing new about the life cycle. Philosophers, poets, playwrights, and novelists have given us ancient and modern formulations. Indian philosophy gives us four stages of man. Shakespeare sets forth seven acts, from the infant mewling and puking in the nurse's arms, through the whining school boy creeping unwiliingly to school and the lover sighing like a furnace, the capon-lined justice, to final second childishness and oblivion. The consistency among these formulations singing down through time suggests that there are some fundamental chords which underlie varied the melodies, harmonies, and overtones played by current studies.

This consistency suggests that cultural and historical relativity do not run unfettered. But we do need to recognize that many of the "findings" which follow undoubtedly differ in significant particulars from those which would result from similar studies carried out in Latin America, Africa, the Middle or Far East. Nevertheless the findings do indicate the significance of changes through the life cycle for the education of adults. And they suggest how fruitful analogous research would be for countries or regions seriously considering educational systems for life-long learning.

Much of the recent research takes account of Erikson's seminal formulations concerning eight developmental stages. (1959, 1963). Some of Neugarten's work (1963, 1969) builds quite explicitly on his framework. Neugarten, more than any other theorist, elaborates the role of age and other theorists, elaborates the role of age and timing in adult development. The shift from "time since birth" to "time left to live" sets boundaries for other major changes; from sense of self-determination to sense of inevitability of the life cycle; from mastery of the outer world, through reexamination, to withdrawal and preoccupation with inner self and sponsoring others; from achievement to self satisfaction. She found that when normal events were "on time" -- children

leaving home, menopause, death of a spouse, even one's own death -- they were not experienced as crises. Departure and death of loved ones causes grief and sadness as does the prospect of one's own leaving, but when it occurs at times and in ways consistent with the normal expected life cycle, most persons manage without major upset.

Neugarten's studies place special emphasis on things happening "on time". But the timing is determined by male career patterns. Unfortunately for women, in many significant careers society has established age limits beyond which certain achievements are next to impossible. Medical schools do not accept people over age 35, sometimes not over age 30. Businesses do not want to train people for top managerial positions after the mid-twenties. One young Black woman graduated as an accounting major at age 26. A firm that interviewed her said that she was too old for their training program by two years. During the decade from age 30 to 40 even some males find breaking into a new career difficult, especially if the career involves some investment by the employer. For women with less direct experience, whose timing differs from the standard pattern, education may offer only broken promises of ready access to new and significant careers.

The problem can be more complex for women married to successful husbands, and who share the rewards of that success. To be the wife of an established physician, professor, lawyer, or rising corporate manager is to be "someone who counts". Beginning on one's own, at the bottom, with the handicap of starting a career "out of phase" is tough. It takes strong hunger for achievement, a powerful desire for self-realization, unusual humility, or all three. One recognizes that starting late represents a willingness to set aside a large investment of self in one social role, and venture into the untested waters of another.

(Insert Figure 1 About Here)

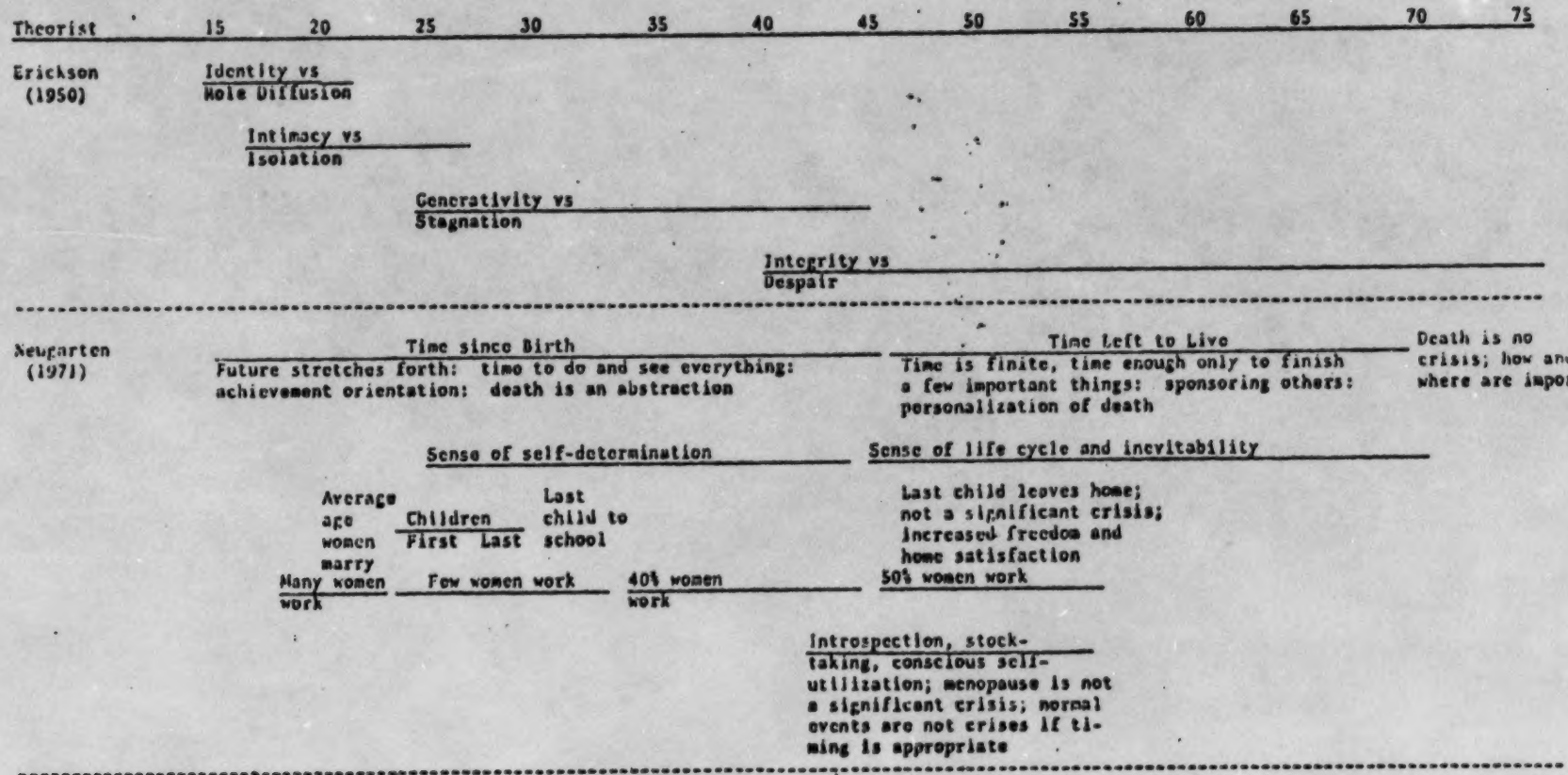
Levinson and Gould describe a general pattern that begins with the transition from adolescence to adulthood during the late teens and early twenties. During the mid-twenties -- a period of "provisional adulthood" -- first commitments to work, marriage, and family, and to other adult responsibilities are explored. Then another transitional period occurs during the late 20's and early 30's where these initial commitments are reexamined and their meanings questioned. The long range implications of continuing with the current work, spouse, community, life style, have become apparent; one or more of these may look less challenging or satisfying than at 22. In some cases changes must be made. In others, reaffirmation and renewed commitment occur on a more solid basis, sometimes after trial flirtations with one or more alternatives.

The thirties are a time for settling down, for achievement, for becoming one's own person. But as the 40's approach time becomes more finite. Responsibility for parents begins to be assumed while responsibilities for adolescent or college-age children continue. The likely limits of success and achievement become more apparent and the "mid-life transition" is at hand. Major questions concerning priorities and values are examined. Unless a change in work is made now, the die is cast. Affirmation of the earlier career most frequently occurs, but with moderated expectations and drive. A long-standing marriage may be temporarily or permanently upset. Friends, relatives, and spouse become increasingly important as "restabilization" occurs during the late 40's or 50's. Interests foregone in the service of work receive more attention. Mellowing and increasing investment in personal relationships characterize the 50's.

Levinson's formulations do not fit the stages women experience. The first stage, Leaving the Family, may actually be aborted for most women as they leave parental constraints only to enter the family constraints of their

Figure 1

The Life Cycle



husband and children. Levinson found that leaving one's parents and establishing a new home base is a time to discover and stretch one's newly found independence, to experiment with a career, and to develop one's individual talents. Independence, experimentation and self development are not congruent with the expected roles of mothers; they are not even consistent with the expected role for wives. In fact, there is substantial evidence that women leave a dependent status with their parents for a dependent status with their husbands. This may appeal to the woman who wants to dodge responsibility for directing her own life. But when the socialization system encourages such behavior and at the same time gives these persons major responsibility for directing the lives of our youth, we set up a serious problem.

The reports from women pursuing continuing education tell us that they are experiencing a decade or more later the experiences Levinson describes for his male subjects in the early periods of adulthood. Establishing identity is bound up closely with choosing a career. What are the consequences for a woman who first chooses in favor of the role of mother or wife, and who later in life, searches for a new career. Is this like the first career for a man, or more akin to a mid-life career change? There seems little doubt most women view a return to school as an initial investment in a new career. Large proportions of women explicity state that they have come back to school to get a better job: another substantial percentage announce that they begin school for a variety of achievement needs but also respond that they definitely intend to work after graduation. Is this strong impetus toward work really an effort to establish, or recover, an identity distinct from husband and children?

Women in the United States have been programmed to keep their ego boundaries diffuse until they find a partner. Then their decisions about doing and being can be shaped to conform to partner and family. Parents have been sending clear messages. "Find someone who will take care of you". "It's good to be dependent on someone; it makes them feel important". "Play dumb, even

Figure 1 (Continued)

15 20 25 30 35 40 45 50 55 60 65 70 75

Mastery of Outer world | Re-examination | Preoccupation with inner self / Withdrawal

Development of social personality; vocation and marital adjustment; home making, child rearing. Increased expressivity & expansiveness, reduced anxiety, increased autonomy, competence, stability

Further stabilization of social personality in family work, recreational patterns. High self-confidence, sense of achievement & mastery. Following outside cues. Energy congruent with opportunities

Inner drives re-examined; achievement demands questioned. Resistence to coercion

Outer world seen as complex, dangerous conflictual. Increasing conformity, passivity

Life review, final restructuring preparatory to death

Increasingly meek and mild

---

leaving the family

getting into the adult world

settling down

becoming one's own person

Restabilization

transitional period

mentor plays significant role

mid-life transition

---

leaving parents breaking out

leaving parents staying out

becoming adult marriage work

question life's meaning

continued questioning of values; time is finite. Responsible for parents as well as children

Occupational die is cast interest in friends, reliance on spouse

mellowing, spouse increasingly important review of contributions

reliance on peers

---

if you know. No one likes a smartie". But the woman reaching for further education and employment outside the home is turning away from those messages; she is reaching for a broader basis of self-definition.

Levinson also describes a long period of investment in career, of developing options, and of a growing confidence, which culminates in a new stage for men in the early thirties. Women who begin a career and then leave it for child-rearing, and who return to a career later, appear to reach that stage of confidence and options much later. Epstein's (1974) observations support this view:

"Both men and women are probably afraid of the heights of ambition, achievement and accomplishments; all these have their costs. But men are forced to face these fears. For those men who are successful in conquering them, the lives they chart may be rich and meaningful. Women are not challenged to face their fears and thus never lose them and remain self doubting. Without the support to do their best, to be their best and to enjoy doing well, most of those who could 'make it' don't".

These fears occur even though many women develop important skills through homemaking, community responsibilities, volunteer activities and part-time employment. Educational institutions should help these women recognize the competence and knowledge they have and thus build confidence more quickly.

For generations the education of women was viewed useful only as it prepared young women to perform better as wives and mothers. For all but the wealthiest families, college was a luxury saved for one's sons who would head households. Within the last two decades, another theory gained favor with those who counselled women, a life cycle theory based on the biological role women play as child-bearers and child rearers. It hypothesized that since a woman would need to omit education during an extended period of child rearing, she should choose some form of

post-secondary training that would prepare her for work before and after child rearing, that had flexible hours so she could be home with children, and that would be available on a drop in, drop out basis. Thus teaching, nursing and office work gained favor as feminine occupations.

Over the last ten years a few persons have criticized such counsel. Alice Rossi, as early as the mid-sixties, claimed that encouraging women to think of their educational experience as something they could develop gradually over a period of years, and creating special access features for women returning to college, only increased women's chances of not having a significant career. She pointed out that continued and uninterrupted investment of self in education and its outcome, expecially in the early adult period of life, was required for outstanding achievement and recognition. Studies of women who have achieved eminence support Rossi's argument. Almost without exception women of great success have displayed uninterrupted devotion to their field. They often married but seldom had children, or had them later in life. (Rossi, 1965)

(Insert Figure 2 About Here)

Lowenthal (1975) recently reported a study of 216 urban men and women from blue collar, white collar, managerial, lower middle and middle class backgrounds which provides somewhat different perspectives on the life cycle. There is much here that is consistent with the other work reported above. But one of her most important contributions lies in the significant differences documented for men and women. Figure 2 signals some of those differences as they occur among high school seniors, newlyweds, at "middle age" (Now defined as age 50!) and at pre-retirement. We'll not repeat those here in the text so take time to assimilate the Figure.

In general self-assertion and achievement seem to be valued less by women than by men. There is also the suggestion that women may be more willing to

Figure 2

Loventhal's Four Stages of Life

15 20 25 30 35 40 45 50 55 60

High School Seniors (Age 16-18)		Middle Aged (Average Age 50)	Pre-retirement (Average Age 60)
Women	**Women**	**Women**	**Women**
Diffuse life style Negative Self Concept Helpless/Dependent	More complex life-style than men Warm, lacking energy Jealous of activities which separate them from husbands	Last child leaves home Negative self concept Unhappy, absent minded Simplistic life style Men seem as dominant Increased marital problems Critical of husband	More positive self-image Competent; less dependent Frank; more assertive
Men	**Men**	**Men**	**Men**
Insecure Discontented Limited perserv..ance	Expansive Bouyant Risk-Taking	Life style narrowed and focused Heightened sense of orderliness Seen as boss of family Rejects ideas of self pity Plateau re job advancement Strain and boredom potential problems	More simplistic life style Concern for companionship nurturance, mellow relationships Self-protective, avoiding stress
	Men and Women		**Men and Women**
	84% Work Shared interests Critical of parents		Renewed interest in spouse

Across All Stages

Women - Concerned with affect and reciprocity; self-ratings higher on charming, cooperative, easily embarrassed and hurt, friendly, helpless, sincere, sympathetic, timid, undecided

Men - Concerned with interests and activities; self-ratings higher or ambitious, assertive, competitive, confident, guileful, calm, hostile, reasonable, self-controlled, shrewd, sophisticated, unconventional, versatile

Both Men and Women -

16 negative attributes declined: absent minded, dependent, disorderly, dissatisfied, easily embarrassed, guileful, helpless, lazy, restless, sarcastic, self-pitying, stubborn, suspicious, timid, undecided, unhappy

3 positive attributes increased: frank, reasoned, self-controlled

recognize shortcomings and men more compelled to deny them. Note that both men and women experience a general increase in effectiveness and efficiency, and in overall self-reliance and self control. Feelings of vulnerability decline as does the need to misrepresent oneself and manipulate others, or to evoke conflict. Older persons develop a more rewarding life through selective disengagement from non-rewarding involvements.

Lowenthal's Four Stages of Life shows the post-parental mother feeling unhappy and her spouse most job focused. The mother who finds reward in work and education enriches her own life and that of her spouse. She becomes stronger, more able to make decisions. She tunes into her masculine components at a time in life when it is more acceptable. Her husband is ready to do less and is glad to have her make decisions. Many women feel that the most important thing they gain in post-secondary education is discovering that learning fosters growth involving not only factual information but a new relationship to things, to people, to self. When this happens, the reward is in discovering that she can do something as well,as or better than anyone else, young or old, male or female. The women who come back want that. They often demand it and will not settle for less.

But the women who take the step toward education and a career are bucking some deeply embedded attitudes. Matina Horner's research on why bright women fail found that graduating at the top of the class was seen as the beginning of tragic stories for women. Both men and women saw the "successful" woman as a tragic figure. They were penalized for being aggressive intellectuals. The study by Broverman et al (1970) gives a different, more comprehensive, and more distressing slant on the same dynamic. Professional men and women were asked to describe the characteristics of a "healthy man", a "healthy woman", and a "healthy person". The characteristics given for the "healthy man" and the "healthy person" were very similar, but the characteristics given for the "healthy woman" were quite different. Apparently it was not possible to be both

a "healthy woman" and a "healthy person". If the woman began to assume the characteristics of a "healthy person" she was becoming too aggressive, assertive, dominating, to be a "healthy woman". But if she retained the passive characteristics assigned to her, she was not really a very healthy person.

Freud asked, "What do women want?" They are now answering, "We want to function as insiders". But, society asks, "Why do you want to crash a man's world?" They answer, "We are not trying to crash a man's world. We only want to re-enter the world in which we live. There is no other". As this re-entry occurs it is inevitable that women will help men redefine their roles. Women have said "no" to men in certain roles. They often have forbidden men entree to the rituals of the home, forbidden men close access to their children's affections, forbidden men life-style options outside middle class values.

If education provides the leverage for women to establish, at least for themselves, an identity dimension related to doing, perhaps it will help men to establish an identity dimension related to being. If commitment to this task is to take place both men and women will need to become involved in life-long learning in a new way. This involvement will have to encompass an ever-growing ability to discriminate and integrate, analyze and synthesize; it will call for an abiding tolerance, a love of discovery combined with a sense of self, a love of involvement in new situations. It will require new searches, an appreciation of one's own being, and its relationship to a wide variety of other beings.

These life cycle forces create recurrent needs for life long learning which lie behind the investments of time, money, and energy, behind the personal sacrifices made by many students.. This research reveals the more basic purposes which power degree aspirations, pursuit of a promotion or career change, desire to meet new persons, read more widely, explore new ideas and interests. These studies also remind us that the existential

questions of meaning, purpose, vocation, social responsibility, dependence, human relationships, which so many adolescents face with difficulty are reconfronted by many 30, 40, and 60 year olds.

Developmental Differences and Educational Alternatives

Life cycle changes both influence, and are influenced by, developmental differences in personality structure. Research and theory concerning personality development and associated learning styles has clear implications for educational motives, orientations toward knowledge, teaching practices, evaluation, and student-faculty relationships. Systematic organization of information can provide a conceptual matrix useful to those concerned with the education of adults. It can be used by administrators in decisions concerning staffing, facilities, educational resources and academic processes; by faculty members as they try to improve their teaching effectiveness with a wide range of adults; by students themselves as they plan to carry out their own education.

In the discussion which follows we focus on three major areas: ego development, moral and ethical development, intellectual development. There are others worth attention which have been discussed elsewhere (See, for example, Chickering, A.W., Education and Identity, and Human Development as a Major Outcome of Experiential Learning, in Morris Keeton (Ed.) Experiential Learning, Jossey-Bass Inc., 1976). The purpose here is simply to suggest the potential of this approach.

Ego Development

Figure 3 summarizes several theorists who have conceptualized comprehensive stages of development. Loevinger, describing their general similarities, says, "All of the conceptions project an abstract continuum that is both a normal developmental sequence and a dimension of individual differences in any age cohort. All represent holistic views of personality and all see behavior in terms of meaning or purposes... All are more or less concerned with impulse control and

Figure 3

	Amoral	Fearful Dependent	Opportunistic	Conforming to Persons	Conforming to Rule	Principled Autonomous
			Ego or Character Types			
arst	1. amoral		2. expedient	3. conforming	4. irrational-conscientious	5. rational-altruistic
livan, & Grant	[1]1 presocial	[1]2 passive-demanding	[1]3 conformist (exploitative)	[1]3 conformist (cooperative)	[1]4 authoritarian guilty	[1]6 self-consistent [1]7 integrative
, Hurst oeder	Sub-1	1. absolutistic-evaluative	2. self-differentiating	3. empathic		4. integrated-independent
ger	1. presocial symbiotic	2. impulse-ridden, fearful	3. self-protective	4. conformist	5. conscientious	6. autonomous integrated
	1. excitation-oriented	3. conflict-avoidant	5. peer and reciprocity oriented	6. social conformist	7. duty and responsibility	8. independent ager orientation 9. self-social integration

ted from Kohlberg, 1973, p. 46

character development, with interpersonal relations, and with cognitive preoccupations, including self-concept... Finally, although the sequence of stages is not identical from author to author, there are many recurring similarities".

(Insert Figure 3 About Here)

Figure 4 shows how Loevinger describes her general stages in terms of four major dimensions: impulse control, character development, interpersonal style, conscious preoccupations, cognitive style. Changes in developmental stage require changes in these four major areas. Change need not necessarily occur simultaneously or in precise one-to-one fashion, but if there is little development in one dimension, further development in the others is restricted. Living by self-evaluated standards is difficult if one is still powerfully preoccupied with appearance and social acceptability. Differentiated feelings and motives, or respect for the autonomy of others, cannot be achieved readily if one is still in the grips of stereotypes and cliches.

(Insert Figure 4 About Here)

Moral and Ethical Development

The major dimensions posited by Loevinger identify areas such as moral and ethical development and intellectual development which have been pursued in more detail by others. Figure 5 juxtaposes Loevinger, Kohlberg, and Perry. Figure 6 describes the Perry and Kohlberg formulations in more detail. The two systems do not fit together precisely because they are complementary rather than closely analogous. Kohlberg emphasizes shifting orientations toward authority, others, and self, such that self-chosen principles replace those given by authority or defined by peers, group identification, or the general culture. Perry describes increasingly complex ways of knowing and thinking about moral issues, ways of defining and maintaining values and commitments while recognizing pluralism and accepting contrasting values and commitments of others.

STAGES OF DEVELOPMENT[1]

Stage	Impulse Control, Character Development	Interpersonal Style	Conscious Preoccupations	Cognitive Style
Presocial		Autistic	Self vs. non-self	
Symbiotic		Symbiotic		
Impulsive	Impulsive, fear of retaliation	Receiving, dependent, exploitive	Bodily feelings, especially sexual and aggressive	Stereotypy, conceptual confusion
Self-protective	Fear of being caught, externalizing blame, opportunistic	Wary, manipulative, exploitive	Self-protection wishes, things, advantage, control	
Conformist	Conformity to external rules, shame, guilt for breaking rules	Belonging, helping, superficial niceness	Appearance, social acceptability, banal feelings, behavior	Conceptual simplicity, stereotypes, cliches
Conscientious	Self-evaluated standards, self-criticism, guilt for consequences	Intensive, responsible, mutual, concern for communications	Differentiated feelings, motives for behavior, self respect, achievements, traits, expression	Conceptual complexity, idea of patterning
Autonomous	Add: Coping with conflicting inner needs, toleration	Add: Respect for autonomy	Vividly conveyed feelings, integration of physiological and psychological, psychological causation of behavior, development, role conception, self-fulfillment, self in social context	Increased conceptual complexity, complex patterns, toleration for ambigui broad scop objectivity
Integrated	Add: Reconciling inner conflicts, renunciation of unattainable	Add: Cherishing of individuality	Add: Identity	

Note – "Add" means in addition to the description applying to the previous level.
[1]From Loevinger, J., Wessler, and Redmore, C. Measuring ego development. San Francisco, Calif.: Jossey-Bass, Inc., 1970.

Figure 4

Note that although both Perry and Kohlberg's systems express very general human values -- pluralism, respect for human dignity and integrity, dissent, individual self-determination and development -- they are relatively content free. Thus educational activities designed to enable change from one stage to the next can be carried on in relation to a wide range of moral and ethical values or issues. Commitments to either a conservative or liberal socio-political view, or to a theistic or atheistic religious belief can be carried to the highest stages, although the particular belief or commitment will be held very differently.

Intellectual Development

Bridges can be built between the ego theorists, the moral and ethical stages postulated by Kohlberg and Perry, and theorists who focus on cognitive development. Kohlberg has done this for the relationship between his stages and Piaget's. Figure 5 adds the general stages of ego development, Perry, Loevinger's cognitive styles, and the hierarchy described in Bloom's Taxonomy of Educational Objectives in the Cognitive Domain (1956). In cognitive development there is a general sequence from concrete memorization through recognition of relationships among events, instances, classes, to cognitive processes which construct combinations of relationships, isolate variables, or create new combinations or groupings, and culminate in the ability to apply principles or concepts to new situations and evaluate the results.

(Insert Figure 5 About Here)

Implications for Education

Unfortunately, the labels used by theorists -- self-protective, opportunistic, conformist, good boy approval-oriented and the like -- are sometimes culturally loaded and pejorative for persons so described. Remember, however, that these labels are shorthand for complex combinations or characteristics that go beyond the oversimplified scheme presented here.

The potential value of these conceptual frameworks concerning adult development is suggested by examining their relationship to differences in motivation, orientations toward knowledge and learning processes. These in turn define

STAGES OF EGO DEVELOPMENT, MORAL AND ETHICAL DEVELOPMENT, AND INTELLECTUAL DEVELOPMENT

Ego Development	Moral and Ethical Development			Intellectual Development	
	(Kohlberg)	(Perry)	(Loevinger)	(Piaget)	(Bloom)
Amoral	Egocentric		Stereotypy, conceptual confusion	Symbolic, intuitive thought	
Fearful-Dependent	Obedience – punishment oriented	Basic duality		Concrete operations, 1. Categorical classification	Memorization
Opportunistic	Instrumental egoism and exchange	Multiplicity prelegitimate		Concrete operations, 2. Reversible concrete thought	Application
Conforming to Persons	Good-boy, approval oriented	Multiplicity subordinate multiplicity correlate or relativism subordinate	Conceptual simplicity, stereotypes, cliches		
Conforming to Rule	Authority, rule, and social order oriented	Relativism correlate, competing, or diffuse	Conceptual complexity, idea of patterning	Formal operations, 1. Relations involving the inverse of the reciprocal Formal operations, 2. Relations or propositions involving triads	Analysis
Principled Autonomous	Social contracts legalistic oriented	Commitment – foreseen	Increased conceptual complexity, complex patterns,	Formal operations, 3. Construction of all possible relations;	Synthesis
	Moral principle orientation	Initial commitment, implications of commitment, developing commitments	toleration for ambiguity, broad scope, objectivity	systematic isolation of variables; deductive hypothesis testing	Evaluation

Figure 5

institutional functions and role. Then educational practices consistent with the learning processes can be posited which carry out the institutional functions. Finally specific programmatic alternatives can be added which translate the earlier elements into concrete operations for which staffing, facility, and budgetary decisions can be made.[1]

Figure 6 sets forth this matrix. It comes from a conceptual framework developed for Empire State College, (Chickering, 1976) which has been developed as an open learning system for the State University of New York. The College is now six years old and serves approximately 3500 students through twenty five different units throughout the state.

(Insert Figure 6 About Here)

Any institution serving a large number of adults will have students at different developmental stages ranging from opportunistic to autonomous levels of ego development, from obedience-punishment orientation to moral principle orientation, from concrete operations and memorization to complex formal operations, synthesis, and evaluation in intellectual development. Because of this diversity an institution cannot simply pitch its educational program at a particular stage. It must develop the capacity to serve the full range.

Educational Practices The problem is that most institutions only focus on one or two developmental levels. Educational practices at many institutions are oriented toward the opportunistic or conformist levels of ego development

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1 The relationships posited in this matrix are consistent with substantial bodies of research and theory concerning post-secondary education. See, for example, Stern's studies of authoritarians, anti-authoritarians, and rationals, and of relationships between student needs and educational environments. The work of Chickering (1969), Chickering and McCormick (1973), Feldman and Newcomb (1969), Heath (1968), Katz (1968), and others concerning college impacts on student development also supports many of the postulated relationships.

Figure 6

Adult Development and

Motives for Education, Orientations toward Knowledge, and Learning Processes*

Ego Development	Moral Development	Intellectual Development	Motive for Education	What Is Knowledge?	What Use Is Knowledge?	Where Does Knowledge Come From?	Learning Processes
Self-protective, opportunistic	Obedience-punishment oriented	Knowledge (simple recall)	Instrumental; satisfy immediate needs	A possession that helps one get desired ends; ritualistic actions that yield solutions	Education to get: means to concrete ends; used by self to obtains effects in world	From external authority; from asking how to get things	Imitation; acquire information, competence, as given by authority
Conformist	Instrument egoism and exchange Good-boy approval-oriented	Comprehension Application	Impress significant others; gain social acceptance; obtain credentials and recognition	General information required for social roles; objective truth given by authority	Education to be: social approval, appearance, status used by self to achieve according to expectations and standards of significant others	From external authority; from asking what others expect and how to do it	
Conscientious	Authority-, rule-, and social-order-oriented	Analysis Synthesis	Achieve competence re competitive or normative standards; increase capacity to meet social responsibilities	Know how: personal skills in problem-solving; divergent views resolved by rational processes	Education to do: competence in work and social roles; used to achieve internalized standards of excellence and to serve society	Personal integration of information based on rational inquiry; from setting goals; from asking what is needed, how things work, and why	Discover correct answers through scientific method and logical analyses; multiple views are recognized but congruence and simplicity are sought
Autonomous	Social contact, legalistic-oriented Moral/principle orientation	Evaluation	Deepen understanding of self, world, and life cycle; develop increasing capacity to manage own destiny	Personally generated insight about self and nature of life; subjective and dialectical; paradox appreciated	Education to become: self-knowledge; self development; used to transform self and the world	Personal experience and reflection; personally generated paradigms, insights, judgments	Seek new experiences; reorganize past conception on the basis of new experiences; develop new paradigms; create new direction

*Note that just as each developmental stage incorporates and transforms earlier stages, it also fosters each subsequent level of motivation, orientation toward knowledge, and learning. Adapted from materials developed by Dr. Barry M. Loeser and Cynthia DeWindt, Harvard Graduate School of Education

Figure 6 (continued)

Individual Differences and Educational Practice*

Individual Differences				Educational Practice			
Ego Development	Intellectual Development	Motive for Education	Where does Knowledge Come From?	Institutional Function	Teaching Practice	Student-Teacher Relationships	Evaluation
Self-protective Opportunistic	Knowledge (simple recall)	Instrumental; satisfy immediate needs	From external authority; from asking how to get things	Arouse attention and maintain interest; to show how things should be done	Lecture-exam	Teacher is authority, transmitter, judge; student is receiver, judged	By teacher only
Conformist	Comprehension Application	Impress significant others; gain social acceptance; obtain credentials and recognition	From external authority; from asking what others expect and how to do it	Provide predetermined information and training programs, certify skills and knowledge	Teacher-led, dialogue or discussion		By teacher only
					Open "leaderless," "learner centered" discussion	Teacher is a "model" for student identification	By teacher and peers
Conscientious	Analysis Synthesis	Achieve competence re competitive or normative standards; increase capacity to meet social responsibilities	Personal integration of information based on rational inquiry; from setting goals; from asking what is needed, how things work, and why	Provide structured programs that offer concrete skills and information; opportunities for rational analysis; and practice, which can be evaluated and certified	Programmed learning, correspondence study, televised instruction	"Teacher" is an abstraction behind system; student a recipient	By system
Autonomous	Evaluation	Deepen understanding of self, world, and life cycle; develop increasing capacity to manage own destiny	Personal experience and reflection; personally generated paradigms, insights, judgments	Ask key questions; pose key dilemmas; confront significant discontinuities and paradoxes; foster personal experience and personally generated insights	Contract learning, 1: time, objectives, activities, evaluation negotiated between student and teacher at the outset and held throughout	Student defines purposes in collegial relationship with teacher	By teacher, peers, system, self; teacher final judge
					Contract learning, 2: time, objectives, activities, evaluation defined generally by student, modifiable with experience	Teacher is resource, contributes to planning and evaluation	By teacher, peers, system, self; self final judge

to identify with persons in authority, to accept their definitions of right and wrong, to avoid punishment by deferring to their power; and (2) the teacher's assertion of authority, an emphasis on dispensing information for students to memorize, and use of exams to punish wrong answers and reward right ones. When the lecture-examination approach goes beyond the personal authority of the teacher and makes use of more abstract authority, as often is the case, then the approach moves to an authority-, rule-, and social-order-oriented level.

Socratic dialogue, or teacher-led discussions, respond to the opportunistic, instrumental egoism and exchange level. They provide rich information about the teacher's views and permit students to shape their own responses accordingly, receiving immediate rewards through the satisfying exchanges that result. Open, "leaderless", "learner-centered" discussions often suit the conforming-to-persons, approval orientation where sensitivity, pleasing and helping others, acceptance of group decisions are called for. Programmed learning, correspondence study, and most other forms of "mediated instruction" currently used fit well the authority, rule, and social-order orientation.

Contract learning can take two forms. In one form the objectives are set by the student, but the time, activities, and criteria for evaluation result from negotiations between the students and teacher. The contract is a commitment to the plan developed, and the plan is adhered to unless major events call for renegotiation. This approach to contract learning best fits the principled autonomous stages of ego development and the social contract, legalistic orientation of moral development. In the second form of contract learning the student, with or without help from the teacher and others, defines the objectives, time, activities, and criteria for evaluation. The "contract" may be quite specific or very general. In either case it will be followed flexibly and modified in the

and to the memorizing, applying, and analyzing levels of intellectual development. They treat education as though it were a commodity, a collection of discrete items, packaged in a few standard-sized boxes, sold by the Carnegie credit. It is not by chance that the supermarket has been an appealing metaphor for some educators and that curricula committees and academic departments, like merchandizers, talk primarily about this or next year's offerings in the light of shifting student interests.

Few curricula, courses, classes, seminars, examinations help students build knowledge from personal experiences and personally generated syntheses and paradigms. Many teachers help students acquire basic competence and knowledge, but few help students use those learnings to make some sense of life and of themselves in it, to generate personal insights through subjective and dialectical processes. Certainly many students are not prepared or motivated for that level of work. But those who are need appropriate opportunities.

Many institutions treat truth as objectively real, modeled, given by authority, or "discovered" by logical or scientific analyses. Conceptions concerning the nature of knowledge, where it comes from, and how it is to be used emphasize acquiring information or competence in order to satisfy immediate needs, to obtain immediate benefits, to do a particular job, to fill a particular role.

The relationship between developmental stages and educational activities become more apparent when explicit teaching practices, student-faculty relationships, and orientations toward evaluation and addressed. The lecture-examination system as often practiced is responsive to the fearful-dependent, opportunistic, and conforming-to-persons levels of ego development and to the obedience-punishment, instrumental egoism and exchange, and good-boy orientations of moral development. The key dynamic here is the comfortable fit between (1) the student's disposition

light of experience as it is pursued. This approach to contract learning best fits the principled autonomous stage and moral/principle orientation.

Of course, contract learning can be highly teacher-controlled and authoritarian, not only in terms of learning activities and evaluation, but also in terms of the purposes judged acceptable. Furthermore, skilled teachers can use lectures and exams, seminars, and group discussions in ways that challenge autonomous students and also serve opportunistic, conformist, and conscientious ones.

Different teaching practices also express different approaches to student-teacher relationships and evaluation. The teacher as an authority, transmitter, socializer, judge, who carries sole responsibility for evaluation, best fits the obedience-punishment and the opportunistic, instrumental egoism stages. The teacher as a model known well enough to permit student identification, where evaluation includes fellow students as well, fits the conformist approval-oriented stage. In programmed learning and other forms of mediated instruction the teacher is an abstraction behind the system. Criteria for evaluation are specified by the system and responses are usually mechanically scored, often by machines. In contract learning the teacher is a resource person who contributes to planning and evaluation. The relationship may be more or less collegial, the student may carry more or less responsibility for defining the program and for evaluation, depending on the approach used. The patterns of relationship and approaches to learning and evaluation in contract learning best fit the principled autonomous stages of ego development and moral development.

The foregoing discussion of relationships among developmental stages, orientations toward knowledge, and educational practices is clearly exploratory and hypothetical. It is presented to suggest a way of thinking about the planning for the post-secondary education of adults.

The basic assumption is that colleges and universities must respond to the major dimensions of adult development and to the ages and stages of the students

served. Students, faculty members and administrators all can profit from, and contribute to, an examination of educational plans and practices in the light of such information. A college president can sit down with these figures and ask, "How do current students distribute themselves among the areas and levels? Which areas and levels of development are best served by the major educational alternatives we provide, and by the facilities, faculty characteristics, and employment expectations which support those alternatives?"

A curriculum committee or a department can ask which levels are addressed by current courses, external programs, seminars, honors courses, major sequences. They can ask that courses and sequences specify relationships between teaching methods, field experiences, areas of student responsibility, readings, writings, examination questions, and the developmental areas and stages for which they are most appropriate.

Participation by faculty members in re-examining their own fields is critical, because they know most about the diverse possibilities available in textbooks and primary sources, in audio-visual materials, programmed learning, and other forms of mediated instruction. They know what kinds of field observations, work experiences, or volunteer activities may have most power. They know the areas of controversy, where the value issues reside, what kinds of career patterns may be possible. In short, the professionals who are directly involved can be sources of creative suggestions for redesigning current courses, majors, and general education programs in ways which more adequately cover the ages, areas, and stages which characterize adult college students.

Students themselves can use this information for self-evaluation and educationa planning. With appropriate supplementary materials, each student can decide (a) whether to pursue one or another area directly, and (b) how to pursue more immediate educational or vocational purposes in ways which also enable stage changes

in one or more valued areas of development. On the basis of such judgements each student can make more powerful, efficient, and economical use of educational alternatives available, help create others not yet considered, and can take more effective charge of his or her learning and personal development.

More basic research and theory concerning adult development and learning is necessary and will be undertaken by the professional specialists whose business it is. But the basic need now is to demonstrate that post-secondary education can contribute to adult development in ways which go beyond simple marketing of skills, information, and credentials.

Educational Quality and Standards

Until the late 1960's each college and university in the United States aimed to serve as carefully selected a group of students as its image and its enrollment pressure would allow. But now commitment to equal educational opportunity is gaining increasing momentum. The rhetoric of equal opportunity applies not only to the typical college-age student of the past but also to adults of all ages and backgrounds. Higher education is now trying to move in a new direction to go beyond socializing "the elite" to training and educating "the masses". Increasing numbers of adults and increased emphasis on life-long learning create greater student diversity than ever before.

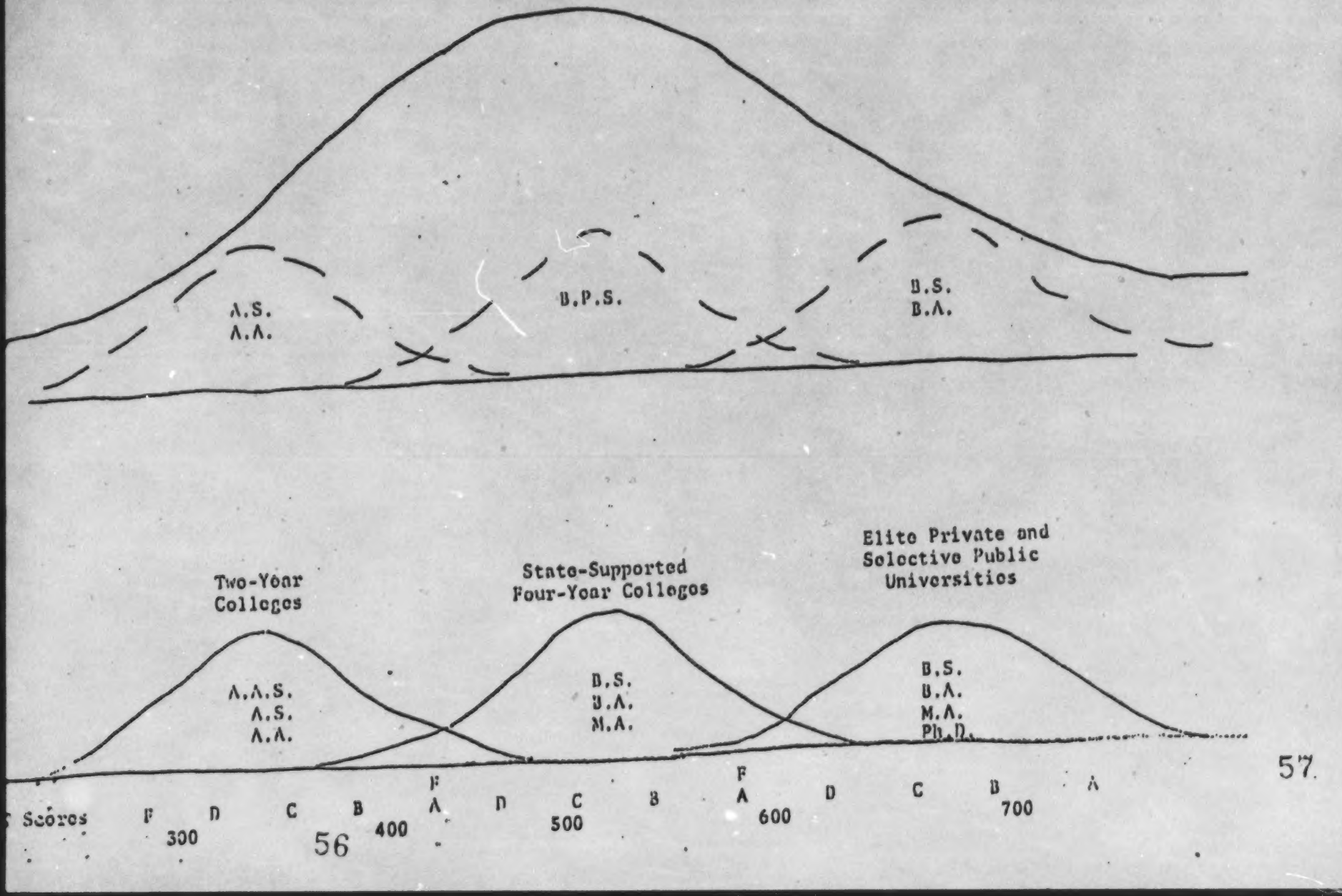
We must now forego the luxury of choosing students to fit college programs, and must instead design programs to fit the students. This complex task raises two problems concerning educational standards: one concerns <u>criteria for performance</u>, the other concerns degree definitions and acceptable <u>areas of performance</u>.

<u>Criteria for Performance</u>

Figure 7, from Empire State's conceptual framework, schematically illustrates one aspect of the criteria problem. Take the horizontal dimension as a measure of academic ability or achievement. Those who have done any work in the sciences

Figure 7

Ability Levels and Grading Curves



will recognize the normal curves. Assume that each of the small curves represents 100 students and that the large Empire State College curve represents 300 students. The bottom half of the figure shows how students tend to be sorted among institutional types in terms of academic ability or achievement. Each institution establishes its own normative framework for evaluation and grades students from A to F. The result is that students receive C's and D's in some institutions when their abilities and performances are superior to students receiving A's in other institutions.

The normative framework used for grading has little relationship to any clear performance indices. During the late 50's and early 60's grading curves remained stable whereas ability levels of students increased markedly for institutions able to be more and more selective. Thus in a four-year period the SAT score for entering freshmen might increase as much as 100 points, but roughly the same proportions of students continued to receive A's and F's. Now the same process is happening in reverse. As enrollments drop admissions standards do likewise, but grading curves remain stable. In fact, recent evidence suggests that increasing proportions receive A's and B's.

In colleges and universities across the U.S. almost the full ability range of these students receive BS and BA degrees, AS and AA degrees. If a college is established to serve students across this range what should it do? If it cannot carve out a small piece of the continuum, how does it establish standards? If it adopts the typical normative approach across the full range of students, then high proportions of those who normally attend and succeed in two-year colleges would have to be failed. If it establishes different standards for different groups, as suggested by the dotted lines in the top half, then it creates first, second, and third-class degrees for first, second, and third-class students--hardly a sound solution.

Degree Definition

The criteria problem is exacerbated to the extent that there is a narrow definition of legitimate college work. K. Patricia Cross, research scholar at Berkeley and former president of the American Association for Higher Education, has put the matter well.

> We know that on any single dimension of human ability half of the students in the nation will be below average. Naive egalitarians have the notion that working with the bottom half will somehow raise them to equal status with the top half. Well, unfortunately, status in the society is relative, and on any single measure there will always be a lower half. The only way to reduce the number in the lower half is to expand the number of dimensions along which talent is measured.

Unfortunately, higher education in the past has recognized and tried to foster only a limited array of human abilities.

In colleges and universities the term "standards" is seldom used without the modifier "academic". Academic standards traditionally have put a premium on reading and writing and on the ability to memorize and manipulate verbal materials. To be sure, underneath this generalization there are curricular alternatives that require additional kinds of competence and knowledge. The sciences and the arts as they are sometimes taught call for certain mechanical and psychomotor skills; teaching practices in the social sciences sometimes call for certain kinds of interpersonal competence. But basically higher education has been hooked on books; verbal skills have been the sine qua non for effective performance.

Today, there is a growing recognition that the range of student purposes and human potentials served by post-secondary education should expand. Industry, labor, social agencies ask higher education to recognize and contribute to professional/vocational training for employees at all levels. Academics argue for more effective integration of liberal and professional education. For these reasons post-secondary education for adults needs to recognize a diverse range

of purposes as legitimate college pursuits: intellectual, vocational, or professional skills; knowledge and competence pertinent to various social problems; broader areas of intellectual competence; more general dimensions of interpersonal competence and personal development.

The quality of education ultimately depends on the ability to respond to significant dimensions of individual difference. It depends on our ability to plan educational activities which recognize those differences, and to evaluate each student according to standards which suit his or her purposes and background. Institutions must recognize that standards need to vary from person to person and from purpose to purpose. A general normative approach cannot be used. Standards will be sound to the degree that the standards established for each combination of individual abilities and purposes are sound.

Criterion- and Norm-Referenced Standards

To provide both formative and summative evaluation effectively in relation to individual purposes and background, we need to distinguish more explicitly between criterion-referenced and norm-referenced standards. For many purposes the important thing is not how one compares with others, but whether one can perform at or above a specified level of competence. These conditions obtain not only for many professional and vocational skills -- secretarial work, machinery repair and operation, technical occupations, accounting and bookkeeping -- but also for more complex responsibilities in education and human services, management and administration, health care and social welfare, agriculture.

In many of these areas employers, certifying agencies and the like also will want to make a judgement about where one person stands in relation to others. When this is the case, competitive examinations and performances may be called for, adding norm-referenced information to the criterion referenced data already available.

The main problem with our current evaluation systems is that they rely heavily on norm-referenced information in the absence of clear and pertinent criteria. Thus the meaning of the norms is unclear and their predictive value is limited. Academic achievement tests, and college grade point averages are a flagrant example. Achievement tests were designed to predict success in college and norms were established based on college grade point averages. But as numerous studies have indicated, college grade point average bears little or no relationship to post-college achievement and success. McClelland's recent commentary on the literature is consistent with Hoyt's (1965) major survey:

"Researchers have in fact had great difficulty demonstrating that grades in school are related to any other behaviors of importance -- other than doing well on aptitude tests. Yet the general public -- including many psychologists and most college officials -- simply has been unable to believe or accept this fact. It seems so self-evident to educators that those who do well in their classes must go on to do better in life that they systematically have disregarded evidence to the contrary that has been accumulating for some time... being a high school or college graduate gave one a credential that opened up certain higher level jobs, but the poorer students in high school or college did as well in life as the top students.... neither amount of education nor grades in school are related to vocational success as a factory worker, bank teller, or air traffic controller. Even for highly intellectual jobs like scientific researcher.... superior on-the-job performance is related in no way to better grades in college". (1973, p. 7)

The practical effect of the circular relationships between achievement tests which determine access to college, and grade point averages once one arrives, is to perpetuate the particular values and skills held by those already in positions of power and authority. It is they who define, often unwittingly, the kinds of knowledge and competence to be rewarded and encouraged by schools and colleges. As long as all persons must pass through this filter, regardless of their other

wide-ranging competence for work and social contribution, the established order is maintained. Suppose, for example, you are a ghetto resident in a large city and want to join the police force. To qualify you have to take a three-hour-long "general intelligence" test and know the meaning of words like "quell", "pyromaniac" "lexicon". If you don't know enough words like these and if you can't play analogy games with them, you will not qualify. Because you don't know such words and have not practiced manipulating them, you are considered to have limited intelligence and must take a different job. This practice goes on despite the fact that there is no solid evidence which relates such verbal measures to performance as a policeman.

Current efforts to establish performance based curricula and evaluation systems may help remedy these conditions. They are long overdue. As long as our criteria are unclear, the meaning of our norms will be fuzzy. Until we make progress in these areas, formative evaluation necessary for learning and summative evaluation necessary for credentials will have limited usefulness.

Learner-referenced Standards

Developing clear criteria as reference points for individual students, and developing norm-referenced information concerning certain kinds of knowledge and competence are complex and difficult tasks. They are necessary but not sufficient for our needs as educators. What we need ultimately are "learning", or more accurately, "learner" referenced standards.

The fundamental purpose of schools and colleges is to help students learn. Learning, according to Webster's Dictionary is, "to gain knowledge or understanding of or skill in by study, instruction, or experience", (1972, p. 480). Yet it is a fact that , despite the millions of hours already invested by thousands of institutions, no standards have been developed for learning. There are no standards for gain, no standards which suggest how much gain in knowledge or skill represents adequate progress, creditable learning, acceptable performance. There

are no standards for learning by which a student trying to learn, a teacher responsible for instruction, or an institution supported to create an environment where learning occurs, might be judged.

We do assess the knowledge, understanding, or skill a student demonstrates at the end of a course, field experience, program of studies. We do judge teachers and institutions by the status of their students when they finish. But we do not judge by the gain which occurs. We assume that learning has occurred among those who perform well. That assumption rests on the view the beginning student is a "tabula rasa" who brings little of the required knowledge or skill. With small children, and in highly specialized areas, that assumption may be sound; in other areas it may be generally sound, but its accuracy varies systematically for certain classes of students. (See, for example, Bloom, B.S., 1964 and Chickering, 1971, 1973) The "tabula rasa" assumption becomes almost ludicrous when applied to adult students whose knowledge, understanding, and skills may span the full range of human potential. The level of ability and preparation adults bring at entrance will vary greatly in relation to almost every general area of college education. We cannot assume they start out blank, at ground zero. Neither can we assume that a simple measure of status, whether it be norm- or criterion-referenced, reflects learning. If our business is helping students learn, and if students are investing dollars, time, and energy to gain in knowledge and skills, then we must develop standards which indicate whether gains have occurred, how much, and of what kinds.

But learning occurs by a learner. The kind and amount of learning appropriate and satisfying for one person may not be so for another. The quality and quantity of learning an institution may judge necessary for one adult may not be suitable for another. Willingham puts the point squarely: "Whenever possible, criterion standards for particular learning outcomes should be stated at several

levels of competence. In a pluralistic educational system, different individuals in different programs or institutions might quite rightly place their learning goals at different levels of competence. Thus, clearly specifying different levels of competence for a particular learning outcome serves not to standardize educational objectives". (Willingham, 1976, p. 241) For these reasons, "learning-referenced" standards need to be made "learner-referenced" so that significant individual differences are always kept in view.

But it seems mind boggling to think about evaluation this way, it seems utopian to hope that we could ever define educational expectations and standards, that we could actually somehow credential learning. But I think substantial progress can be made, especially if we are willing to forego codified generalizations and begin with rough guides which contribute to professional judgement and institutional practices. These rough guides can comprise what Morris Keeton calls a "standards file".

Standards File

"A standards file is a combination of three things. First, it states in abstract terms the objective to be met by an adequate performance at a named level of proficiency. Suppose, for example, that the objective is proficiency in the writing of an essay in standard English. The criteria of literacy (spelling, grammer, punction), organization, style, validity of reasoning, and so forth would be stated in abstract terms. Second, it contains examples of products or performances that meet the abstractly stated level of proficiency on that criterion. On the writing standard, for example, sample student essays would be in the file. Third, it contains analytic statements by qualified assessors as to the respects in which the products or performances shown do and do not fulfill the terms of the objective. In the writing example, the assessors would state how well or how badly each sample essay fulfilled each of the abstract criteria.

Given only the abstract statement of criterion, different interpreters can read quite different meanings and expectations into the situation. Given only the statement and the products, different interpreters can decide that the product fulfills the statement for quite different reasons. Given all three, differences of interpretation will continue, but the gaps in understanding can be narrowed within reasonable bounds". (Keeton, 1976, pp. 15,16)

Keeton is suggesting the standards files as an approach to criterion-referenced evaluation. A similar approach can be taken for learner-referenced evaluation.

The ingredients would look something like this:

1. A learning objective abstractly stated.

2. General definitions of different levels of competence, knowledge, or performance pertinent to the objective.

3. Sample products or performances illustrating different levels of competence or knowledge typically demonstrated be diverse beginning students.

4. Sample products or performances illustrating "final" levels of competence or knowledge by the same students.

5. Analytic comments by qualified teachers as to the quality and quantity of learning revealed in relation to the abstract objective and different competence levels.

Thus a learner referenced standards file for writing proficiency would begin with an abstractly stated objective as in Keeton's description above. But next it would illustrate different levels of and styles of writing pertinent to particular objectives or performance situations. There would be performance samples for reports needed in certain technical occupations,

samples of personnel reports and evaluations required for different supervisory positions, samples of research reports, policy analyses and the like required of various professionals, samples of essays and literary styles called for in various teaching and academic settings -- and of course there would have to be samples of the ubiquitous memos without which administrators would be helpless. This collection of samples would serve as criteria for effective writing related to the personal or professional goals of the student.

Next would be samples for typical beginners, illustrating various shortcomings and weaknesses. Additional samples for the same students after three months, six months, or a year of pertinent educational activities would illustrate the kinds of improvement which had occurred, or the lack thereof. Sets of "before" and "after" samples could then be identified which represented inadequate progress, adequate progress, and superior progress. Each of these sets would be accompanied by analytic comments indicating the basis for the judgements.

Some such approach as this would provide information concerning criteria for varied kinds of writing pertinent to diverse personal and professional roles and responsibilities. It also would provide valuable instructional information. Most important, the collection of before and after sets would provide basis for developing learner-referenced norms so that evaluation could be based on gain rather than simply on status.

These learner-referenced files can then be articulated with the criterion-referenced files suggested by Keeton. The beginning levels of competence demonstrated by some students may overlap some of the lower levels. Sometimes "final" levels may not reach the standards set for full achievement. In either case we have developed a standards file that helps students and teachers evaluate both the learning which occurs and the status at whatever point in time a "final" judgement must be made.

Given the diverse needs for life long learning, and the diverse backgrounds and preparation of adults some such approach as this needs to be developed if educational effectiveness and the contributions of our current and new institutions, are to move ahead. (For more detailed discussion of individualized evaluation see Chickering, A.W., Evaluation in the Context of Contract Learning, 1976)

Cultural Shifts

Our heightened concern for the post-secondary education of adults, and the particular attention given to women, stems from major cultural shifts in the nature of work and in sex roles and expectations. These shifts powerfully influence the motives, the life cycle, and the dimensions of development reported above. It seems likely that all nations in the world will experience analogous changes in these two areas. Educational systems designed now will have to respond.

Work Since 1900 in the United States the average life span has doubled and the working life span has more than doubled. The average life expectancy of a man who reaches age 50 is 78, of a woman, 83. Older persons enjoy better health and more energy for longer periods of time. Moreover, the number of hours per year in paid employment has been cut in half during the same period.

The injuries and hardships of farming and manual labor, of factory work and housework, used to mean that by age forty or fifty most men and women were worn out. Even though they started earlier, at age 12 or 15 perhaps, that had to stop, or taper off, much sooner. Now the 50 year old who looks back at twenty-five years of professional or vocational achievement, can look forward to 25 more years, time enough to begin a completely new career, and also more than enough time for stagnation and despair. Retirement at sixty five is often premature and frustrating.

These shifting relationships between aging and work are provoked by changing from an agrarian to a technological and "post-technological" society. In 1900 the largest single group, and the majority of the American people, made a living on the farm. By 1940 the man on the assembly line, the worker, the semi-skilled machine operator dominated the work force. Today the center of the work force is the "knowledge worker", the person who applies ideas, concepts, and information to his job rather than manual skill or muscle.

Until the last half of this century, the boundaries between "work" and "school" were quite clear. You stopped going to school and went to work. That was the end of schooling. It certainly was not the end of learning, but it was the end of systematic and formal attempts to acquire new information, concepts, and abilities.

In the past the pressure for increased knowledge and intellectual competence has been met by extending the years of schooling -- first beyond elementary school to include high school, then beyond high school to include college, to the point where almost 50 percent of U.S. high school graduates pursue some form of higher education. This response still assumes the separation of schooling and work, and assumes that in a given number of years an institution can cram into a skull most of what a person needs for the rest of life. Even if those assumptions made sense a hundred years ago they are now absurd. None of us knows the knowledge and competence he or she will need fifteen or twenty years from now. We do know that much of that knowledge does not yet exist. We know also that learning occurs most effectively when it connects with immediate concerns of the learner, with important experiences and responsibilities, and that learning is lost fast if it is not built in through action and use.

These fundamental shifts in the world of work mean that past and current arrangements which viewed education as preparation for life will no longer serve.

New alternatives must be created which make education part of life, which capitalize on the educational experiences available through daily living, which makes use of the learnings that can be gained from responsibilities at home, at work, and in the community.

Sex Roles and Expectations Shifting social expectations concerning the roles and responsibilities of men and women have major consequences for motivation and for the educational alternatives needed.

The history of women cannot be separated from the history of humanity. Historically, when people had to make a living, women were the home builders of yurtas, pueblos, camel-hair tents, leaf huts. They were central to all forms of production: leather work, basketry, spinning, weaving, pottery and agricultural products. In feudal castles the wife of the lord of the manor was part of the managerial team that supervised a complex economic operation of servants, apprentices, employees, bailiffs and supervisors, visitors. In pioneer times the women shared the hard work of planting and harvesting; they fought at their husband's side and were an integral part of making a living for the family.

A major shift occurred when the industrial revolution moved people from making a living to earning a living. Power became centralized in the hands of the industrialists and plant managers who paid money for labor. The family used to be the industrial and economic unit. Today, even in the rural sections, few farmers are engaged in making a living. For the most part they raise cash crops to sell. With the decline of the rural population and the growth of the cities, almost every one is being forced to seek a job and rely totally on earned income.

Frank describes current conditions thus:

"Money income is the focus of endeavor and the only means to a livelihood, in earning which not only men but increasingly women, unmarried and

married are engaged. The conditions affecting gainful occupations are therefore of prime significance for the family life and the home, since the individual man and woman is subject to their governance. The helplessness of the individual is perhaps the outstanding characteristic of these conditions, whatever may be the individual's capacity and skill". (Reeves, 1972, pp. 244-245)

This helplessness has been experienced most keenly by women. As the significance of their role in making a living and managing a complex household diminished, so also did their status and equality. They were left behind as the centers of power moved to the factories and businesses.

Since 1900 women have gradually been establishing themselves as earners. These changes in the world of work have had significant impact on sex roles and expectations in the last 50 years. In 1910 23% of the paid work force were women. During World War II the proportion grew to 35%, but at the end of the war 3 million women left the work force. In 1920, married women made up 9% of the work force; during the depression the proportion grew to 35%. By 1960 60% of the female work force were married, 38% were at least 45 years old and one third were mothers. By 1974 there were nearly 35 million women in the work force almost 40% of the total employed outside the home.

The changes in life expectancy, work-life, and frequency of employment outside the home, were accompanied by trends toward smaller numbers of children and a large increase in the numbers of families headed by women. Part-time employment opportunities also increased and government action prohibited employment discrimination based on sex.

Some of these changes have occurred more substantially elsewhere in the world. In Poland, for example, women account for 94% of the physicians, 84% of the engineers, 70% of the skilled workers, 70% of the biologists, 50% of the geographers, 47% of the chemists, 40% of the mathematicians. In the course of only six years, from 1958-64, the number of women engineers doubled.

But there are still problems, as the following quotation suggests:

"A young engineer coming from a peasant family, father of a 4 year old boy whose wife is working, writes: 'In my family there is full mutual understanding. We believe that one child in a family is not enough, however, in our situation tw children would probably be too many, for this would mean that one of us would hav to give up his aspirations, to interrupt work and to give up his life career. The share each of us takes in household tasks and family responsibilities is to my wife's disadvantage. I do the heavy tasks, while my wife does the everyday, ordinary chores which are more numerous and which take up much time. My wife attends to the child more than I do. Budget planning is her exclusive responsibility as is running the kitchen, despite the fact that we have domestic help. It is my wife who does the shopping, I only meet her at the station and help her bringing the articles home. Most of the tasks which now unduly encumber her, she has taken upon herself entirely of her own volition, believing that she herself can do them best. As a very industrious person she did not try to make her life easier. I on my part, while doing various household tasks, thought how to rationalize and alleviate that work. At first, I invariably came up against my wife's objections until I proved the practical advantage of my deviees... now my wife has changed her views and owing to that my share in household work in what is called 'female' tasks has grown. My role in this respect is usually a subsidiary one. I treat household tasks lightly; I dislike them greatly; I do them, however, out of a sense of responsibility or rather to have peace in the family... My wife is an equal partner in the family and I am glad about it. I strongly believe that this should be the case in every family. The spouses should develop intellectually and keep pace with each other in this respect". (Wrochno, 1969, pg. 66)

An inquiry conducted by Filipenka, a bi-weekly for girls asked "What is - in your opinion - the most important difference between your attitude towards

life and that of your mother's generation?" The 675 replies that came in were quite similar in reflecting desire to acquire an education as a way to become independent and have a definite vocation. A characteristic reply came from a 23 year old teacher from a farm family:

"People of my mother's generation believed that the most important thing in the life of a girl was to get a rich husband. Education was not important. I believe that it is first necessary to acquire an education, to enrich it continually and then to found a home with a man one loves".

A similar 1973 survey of students at 8 east and west coast colleges in the United States found that 82% of the college women consider a career very important for their self-fulfillment. They put career above marriage and having children. (Katz, 1976) Even male students represent a substantial shift in attitude; 86% of the men say that fathers should spend as much time as mothers in bringing up children.

These cultural shifts in the nature and role of work, and in sex role expectations create motives and conditions entirely new to post-secondary education. Most current educational forms assume full-time education prior to assuming adult responsibilities. They bring large numbers of students and faculty to a single location, require major investments in extensive campuses and expensive facilities, restrict educational activities to classrooms and lectures. They build special laboratories and evaluate learning through verbal performances with pencils and paper. These forms clearly will not serve adult motives rooted so deeply in life cycle changes and shifting cultural conditions. New forms for the post-secondary education of adults have been stimulated by these changes. These forms, and others yet to be developed, must remain responsive to the continued changes which will most assuredly occur.

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